

IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A method comprising:
transmitting a packet on a wireless network;
if transmitting the packet is not successful, then performing the tasks of:
 setting a contention window parameter according to a fast backoff operation, and
 if transmitting a preceding packet is not successful then increasing a threshold
 value;
if transmitting the packet is successful and the current value of the contention window
parameter is less than the threshold value then decreasing the contention window parameter
according to a contention avoidance operation; and
if transmitting the packet is successful and the current value of the contention window
parameter is greater than the threshold value then decreasing the contention window parameter
according to a slow start operation.
2. (Original) The method of claim 1, wherein the fast backoff operation comprises
increasing the contention window parameter in an exponential manner.
3. (Original) The method of claim 2, wherein the fast backoff operation comprises
substantially doubling the contention window parameter.
4. (Original) The method of claim 1 wherein the fast backoff operation comprises
setting the contention window parameter to a predetermined maximum value.
5. (Original) The method of claim 1, wherein the contention avoidance operation
decreases the contention window parameter in a substantially linear manner.
6. (Original) The method of claim 1, wherein the contention avoidance operation
subtracts a predetermined stepsize value from the contention window parameter.

7. (Original) The method of claim 6, wherein the stepsize value is determined according to the contention window parameter.
8. (Original) The method of claim 1, wherein the slow start operation decreases the contention window parameter in a substantially exponential manner.
9. (Original) The method of claim 1, wherein the slow start operation substantially halves the contention window parameter.
10. (Original) The method of claim 1, further comprising setting the contention window parameter to a predetermined maximum value prior to transmitting any packets.
11. (Currently Amended) A network device comprising:
a processor;
a memory coupled to the processor;
a wireless network interface coupled to the processor;
wherein the processor is operable to cause the network interface to:
transmit a packet on a wireless network,
if the packet is not successfully transmitted, then performing the tasks of:
setting a contention window parameter according to a fast backoff operation, and
if transmitting a preceding packet is not successful then increasing a threshold value,
if the packet is ~~successful~~ successfully transmitted and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation, and
if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation.

12. (Original) The network device of claim 11, wherein the fast backoff operation comprises increasing the contention window parameter in an exponential manner.

13. (Original) The network device of claim 12, wherein the fast backoff operation comprises substantially doubling the contention window parameter.

14. (Original) The network device of claim 11 wherein the fast backoff operation comprises setting the contention window parameter to a predetermined maximum value.

15. (Original) The network device of claim 11, wherein the contention avoidance operation decreases the contention window parameter in a substantially linear manner.

16. (Original) The network device of claim 11, wherein the contention avoidance operation subtracts a predetermined stepsize value from the contention window parameter.

17. (Currently Amended) The network device of claim 14, wherein the stepsize value is determined according to [[a]] the current contention window parameter.

18. (Original) The network device of claim 11, wherein the slow start operation decrease the contention window parameter in a substantially exponential manner.

19. (Original) The network device of claim 11, wherein the slow start operation substantially halves the contention window parameter value.

20. (Original) The network device of claim 11, further comprising setting the contention window parameter to a predetermined maximum value prior to transmitting any packets.

21. (Original) The network device of claim 11, wherein the processor, memory and wireless network interface are incorporated in a network interface card.

22. (Original) The network device of claim 11, wherein the processor, memory and wireless network interface are incorporated in a wireless base station.

23. (Original) The network device of claim 11, wherein the processor, memory and wireless network interface are incorporated in a personal digital assistant.

24. (Original) The network device of claim 11, wherein the processor, memory and wireless network interface are incorporated in a personal computer.

25. (Original) The network device of claim 11, wherein the processor, memory and wireless network interface are incorporated in a server computer.

26. (Original) The network device of claim 11, wherein the wireless network interface is an interface to network conforming to an IEEE 802.11 protocol.

27. (Currently Amended) A ~~machine-readable~~ computer-readable medium ~~have~~ machine having computer executable instructions for causing one or more processors to perform performing a method for controlling contention in a wireless network device, the method comprising:

transmitting a packet on a wireless network;

if transmitting the packet is not successful, then performing the tasks of:

setting a contention window parameter according to a fast backoff operation, and

if transmitting a preceding packet is not successful then increasing a threshold value;

if transmitting the packet is successful and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation; and

if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation.

28. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, wherein the fast backoff operation comprises increasing the contention window parameter in an exponential manner.

29. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 28, wherein the fast backoff operation comprises substantially doubling the contention window parameter.

30. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27 wherein the fast backoff operation comprises setting the contention window parameter to a predetermined maximum value.

31. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, wherein the contention avoidance operation decreases the contention window parameter in a substantially linear manner.

32. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, wherein the contention avoidance operation subtracts a predetermined stepsize value from the contention window parameter.

33. ((Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 32, wherein the stepsize value is determined according to the contention window parameter.

34. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, wherein the slow start operation decreases the contention window parameter in a substantially exponential manner.

35. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, wherein the slow start operation substantially halves the contention window parameter.

36. (Currently Amended) The ~~machine-readable~~ computer-readable medium of claim 27, further comprising setting the contention window parameter to a predetermined maximum value prior to transmitting any packets.

37. (Currently Amended) A system comprising:
a media access and control module;
a distributed coordination function module coupled to the media access and control module operable to:
transmit a packet on a wireless network,
if the packet is not successfully transmitted, then performing the tasks of:
setting a contention window parameter according to a fast backoff operation, and
if transmitting a preceding packet is not successful then increasing a threshold value,
if the packet is ~~successful~~ successfully transmitted and the current value of the contention window parameter is less than the threshold value then decreasing the contention window parameter according to a contention avoidance operation, and
if transmitting the packet is successful and the current value of the contention window parameter is greater than the threshold value then decreasing the contention window parameter according to a slow start operation.

38. (Original) The system of claim 37, wherein the fast backoff operation comprises increasing the contention window parameter in an exponential manner.

39. (Original) The system of claim 37, wherein the contention avoidance operation decreases the contention window parameter in a substantially linear manner.

40. (Original) The system of claim 37, wherein the slow start operation decrease the contention window parameter in a substantially exponential manner.